We claim:

1. A therapeutic vaccine composition comprising a therapeutic effective amount of:

a composition comprising at least one purified recombinant HCV single or specific oligomeric recombinant envelope proteins selected from the group consisting of an E1 protein and an E2 protein; and optionally a pharmaceutically acceptable adjuvant.

2. A composition according to claim 1 wherein said recombinant HCV envelope proteins are produced by recombinant mammalian cells.

3. A composition according to claim 1 wherein said recombinant HCV envelope proteins are produced by recombinant yeast cells.

4. A therapeutic vaccine composition comprising a therapeutically effective amount of a composition comprising at least one of the following E1 and E2 peptides:

E1-31 (SEQ ID NO:56) spanning amino acids 181 to 200 of the Core/E1 V1 region,

E1-33 (SEQ ID NO:57) spanning amino acids 193 to 212 of the E1 region,

E1-35 (SEQ ID NO:58) spanning amino acids 205 to 224 of the E1 V2 region (epitope B),

E1-35A (SEQ ID NO:59) spanning amino acids 208 to 227 of the E1 V2 region (epitope B),

1bE1 (SEQ ID NO:53) spanning amino acids 192 to 228 of E1 regions V1, C1, and V2 regions (containing epitope B),

E1-51 (SEQ ID NO:66) spanning amino acids 301 to 320 of the E1 region,

E1-53 (SEQ ID NO:67) spanning amino acids 313 to 332 of the E1 C4 region (epitope A),

E1-55 (SEQ ID NO:68) spanning amino acids 325 to 344 of the E1 region.

Env 67 or E2-67 (SEQ ID NO:72) spanning amino acid positions 397 to 418 of the E2 region (epitope A),

Env 69 or E2-69 (SEQ ID NO:73) spanning amino acid positions 409 to 428 of the E2 region (epitope A),

Env 23 or E2-23 (SEQ ID NO:86) spanning positions 583 to 602 of the E2 region (epitope E),

Env 25 or E2-25 (SEQ ID NO:87) spanning positions 595 to 614 of the E2 region (epitope E),

Env 27 or E2-27 (SEQ ID NO:88) spanning positions 607 to 626 of the E2 region (epitope E),

Env 178 or E2-178 (SEQ ID NO:83) spanning positions 547 to 586 of the E2 region (epitope D),

Env 13B or E2-13B (SEQ ID NO:82) spanning positions 523 to 542 of the E2 region (epitope C),

IGP 1626 spanning positions 192-211 of the E1 region (SEQ ID NO:112),

IGP 1627 spanning positions 204-223 of the E1 region (SEQ ID NO:113),

IGP 1628 spanning positions 216-235 of the E1 region (SEQ ID NO:114),

IGP 1629 spanning positions 228-247 of the E1 region (SEQ ID NO:115),

IGP 1630 spanning positions 240-259 of the E1 region (SEQ ID NO:116),

IGP 1631 spanning positions 252-271of the E1 region (SEQ ID NO:117),

IGP 1632 spanning positions 264-283 of the E1 region (SEQ ID NO:118),

IGP 1633 spanning positions 276-295 of the E1 region (SEQ ID NO:119),

IGP 1634 spanning positions 288-307 of the E1 region (SEQ ID NO:120),

IGP 1635 spanning positions 300-319 of the E1 region (SEQ ID NO:121) and

IGP 1636 spanning positions 312-331 of the E1 region (SEQ ID NO:122).

5. A method of treating a mammal infected with HCV comprising administering an effective amount of a composition according to any one of claims 1-4 and, optionally, a pharmaceutically acceptable adjuvant.

6. The method of claim 5 wherein said mammal is a human.

7. A composition comprising at least one purified recombinant HCV recombinant envelope proteins selected from the group consisting of an E1 protein and an E2 protein, and optionally an adjuvant.

8. A composition comprising at least one of the following E1 and E2 peptides:

E1-31 (SEQ ID NO:56) spanning amino acids 181 to 200 of the Core/E1 V1 region,

E1-33 (SEQ ID NO:57) spanning amino acids 193 to 212 of the E1 region,

E1-35 (SEQ ID NO:58) spanning amino acids 205 to 224 of the E1 V2 region (epitope B),

E1-35A (SEQ ID NO:59) spanning amino acids 208 to 227 of the E1 V2 region (epitope B),

1bE1 (SEQ ID NO:53) spanning amino acids 192 to 228 of E1 regions V1, C1, and V2 regions (containing epitope B),

E1-51 (SEQ ID NO:66) spanning amino acids 301 to 320 of the E1 region,

E1-53 (SEQ ID NO:67) spanning amino acids 313 to 332 of the E1 C4 region (epitope A),

E1-55 (SEQ ID NO:68) spanning amino acids 325 to 344 of the E1 region,

Env 67 or E2-67 (SEQ ID NO:72) spanning amino acid positions 397 to 418 of the E2 region (epitope A),

Env 69 or E2-69 (SEQ ID NO:73) spanning amino acid positions 409 to 428 of the E2 region (epitope A),

Env 23 or E2-23 (SEQ ID NO:86) spanning positions 583 to 602 of the E2 region (epitope E),

Env 25 or E2-25 (SEQ ID NO:87) spanning positions 595 to 614 of the E2 region (epitope E),

Env 27 or E2-27 (SEQ ID NO:88) spanning positions 607 to 626 of the E2 region (epitope E),

Env 178 or E2-178 (SEQ ID NO:83) spanning positions 547 to 586 of the E2 region (epitope D),

Env 13B or E2-13B (SEQ ID NO:82) spanning positions 523 to 542 of the E2 region (epitope C),

IGP 1626 spanning positions 192-211 of the E1 region (SEQ ID NO:112),

IGP 1627 spanning positions 204-223 of the E1 region (SEQ ID NO:113),

IGP 1628 spanning positions 216-235 of the E1 region (SEQ ID NO:114),

IGP 1629 spanning positions 228-247 of the E1 region (SEQ ID NO:115),

IGP 1630 spanning positions 240-259 of the E1 region (SEQ ID NO:116),

IGP 1631 spanning positions 252-271of the E1 region (SEQ ID NO:117),
IGP 1632 spanning positions 264-283 of the E1 region (SEQ ID NO:118),
IGP 1633 spanning positions 276-295 of the E1 region (SEQ ID NO:119),
IGP 1634 spanning positions 288-307 of the E1 region (SEQ ID NO:120),
IGP 1635 spanning positions 300-319 of the E1 region (SEQ ID NO:121) and
IGP 1636 spanning positions 312-331 of the E1 region (SEQ ID NO:122).

9. A therapeutic composition for inducing HCV-specific antibodies comprising a therapeutic effective amount of a composition comprising an E1/E2 complex formed from purified recombinant HCV single or specific oligomeric recombinant E1 or E2 proteins; and optionally a pharmaceutically acceptable adjuvant.

10. A composition according to claim 9 wherein said recombinant HCV envelope proteins are produced by recombinant mammalian cells.

11. A composition according to claim 9 wherein said recombinant HCV envelope proteins are produced by recombinant yeast cells.

12. A method of treating a mammal infected with HCV comprising administering an effective amount of a composition according to any one of claims 9-11 and, optionally, a pharmaceutically acceptable adjuvant.

13. The method of claim 12 wherein said mammal is a human.

14. A therapeutic composition for inducing HCV-specific antibodies comprising a therapeutic effective amount of a composition comprising at least one purified recombinant HCV single or specific oligomeric recombinant envelope protein selected from the group consisting of an E1 protein and an E2 protein; and optionally a pharmaceutically acceptable adjuvant.